

REMARKS

The application includes claims 1-5 in which claim 5 has been withdrawn. Claims 1-4 are rejected. With this paper, claim 1 is amended. The support for the amendment can be found in the description of experiment examples from page 13 to page 24 of the originally filed specification. No new matter has been introduced.

Statement of the Substance of the Interview

An interview participated by Examiner Mathieu D. Vargot and the undersigned applicant's representative was held on February 12, 2007 at USPTO. Exhibits shown were examples of the PVA film and comparative films. Claims in this case were discussed. Prior art references that applied were discussed with regard to the claims.

Upon closer review, the Examiner decided that JP 138,405 (JP-405) would be a better primary reference. While this document measures the roll hardness not the film hardness, the instant claims do not define over this for this reason - the overall film and core hardness is dependent on the amount/layers of film wound around. In this case, a few layers wound on the core of JP-405 would probably not change the Shore A hardness disclosed in the Abstract of JP-405 to any significant extent.

Claim Rejections under 35 USC §103

The Office rejected claims under the following grounds:

1. Claims 1, 3 and 4 are rejected under 35 USC §103(a) as being unpatentable over Japanese document 10-138,405 (JP-405 hereinafter), either alone, or further in view of Japanese document Kokai 62-101,421 (JP-421 hereinafter).

2. Claim 2 is rejected under 35 USC §103(a) as being unpatentable over JP-405 in view of Japanese document P3075431 (JP-431 hereinafter), either alone, or further in view of JP-421.

The present invention as in amended claim 1 is a process of making a roll of polyvinyl alcohol (PVA) film. The roll of the PVA film is made by forming a PVA film from a solution of a PVA resin, and rolling up the PVA film around a cylindrical core made of a metallic material (as currently amended). The roll of the PVA film produced by the process is characterized in that the surface hardness of the film roll is adjusted to a Shore A hardness of 60 to 95 measured according to JIS K 6301 under conditions of 25°C and 55% RH, and 1,000 meters of the polyvinyl alcohol film is wound around the cylindrical core.

JP-405 relates to a process of laminating a cellulose based film with a polyvinyl alcohol (PVA) based film through a "lamine roll". In particular, the lamine roll is made with rubber and the surface hardness of the lamine roll is within the range of 70-90 in Shore A hardness (JIS K-6301).

The Examiner acknowledged that JP-405 does not teach (1) the roll is made of a metal, and (2) the film roll hardness (i.e. the hardness of a roll of laminated film, which should not be confused with the "lamine roll") is necessarily within the claimed range. However, the Examiner asserts that, *"it should be noted that the film roll hardness is ultimately dependent on many facts, including tension applied to the film during rolling and thickness of the film after rolling i.e. how much film is put on the roller. It is very conceivable that the hardness of the film roll of JP-405 does not deviate from the roll hardness dependent on these factors. "*

The Applicant respectfully submits that, first, JP-405 teaches that the appearance of the laminated film is improved by using the lamine roll with the specified surface hardness. This is because the film was fed through the lamine roll (actually it is a pair of rolls for lamination), not because the film is wound around the lamine roll. Second, although it is true that film roll hardness (i.e. the surface hardness of a roll of film produced by the lamination process) is ultimately dependent on many facts, including tension applied to the film during rolling and thickness of the film after rolling, there is no mentioning in JP-405 that the surface hardness of the laminated film roll is within the claimed range of 60-95.

The Applicant agrees with the Examiner's statement that if a roll of film comprises only a few layers of film on a core, the surface hardness of the film roll could be affected by the hardness of the core (again, the core here is the base for winding the film on, not the roll for laminating the film, and JP-405 never specifies the hardness of the core). Therefore, in the Examples described in the present application, the surface hardness of a roll of film was measured with 1,000 m of film wound on the core. This ensures that the surface hardness of the film roll is not affected by the hardness of the core.

Accordingly, claim 1 is amended to recite that "said hardness being measured according to JIS K 6301 under conditions of 25°C and 55% RH, and on 1,000 m of the polyvinyl alcohol film wound around the cylindrical core."

As of the tensions imparted to the film as it is wound, although it has an effect on the hardness of the roll of film after being wound, it needs not to be specified in the claim. It is known that the surface hardness and the tension of the film are not independent of each other. Also, JP-405 does not teach or suggest the tension as well. The effects of the present invention can be obtained by adjusting the surface hardness of the film roll to 60-95 in terms of Shore A hardness when 1000 m of film is wound on the core. Therefore, the tension is not particularly limited.

JP-421 discloses a process for treating a polyethylene terephthalate (PET) film and the winding hardness of the PET film roll is about 88 to 96% (JIS K-6301). As presented in the previous responses, PET film is completely different from PVA film in terms of winding properties. The difference is commonly known to persons skilled in the art. Since a roll of PET film wound around a core is a completely different subject matter than a roll of PVA film wound around a core, it is not possible to combine JP-405 with JP-421 to arrive at the present invention. Besides, neither JP-405 nor JP-421 teaches nor suggests such combination.

JP-431 discloses a method of packing a PVA film that comprises winding the film around a paper pipe core to form a roll and covering the roll with a moisture-impermeable film of 1g/m²-24 hrs, wherein the PVA film has a water content of 5% or less. JP-431 neither describes nor suggests a surface hardness of the PVA film roll. The core for winding up the

PVA film is a paper pipe core not a core made of a metallic material.

Based on the foregoing, the currently amended claim 1 is patentable over JP-405 in view of JP-421. Applicant respectfully requests the rejection of claim 1 be reconsidered and withdrawn.

Claims 2-4 depend from claim 1. Since claim 1 is believed to be patentable, claims 2-4 are also patentable. Applicant respectfully requests the rejections of claims 2-4 be reconsidered and withdrawn.

Conclusion

For all the foregoing reasons, it is believed that all the remaining claims of the instant application are patentable, and their passage to issue is earnestly solicited. Applicant's agent urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

Respectfully submitted,



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